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ABSTRACT

A cost analysis of the developmental education program on the North Campus of Florida Junior College at Jacksonville revealed that in the 1972/1973 fiscal year the special credit courses offered for remedial students cost over 80 percent more than regular credit courses. Among the developmental courses offered (English, reading, mathematics, and social science) reading was found to be the most expensive. Most of the cost, nearly 70 percent, was directly attributable to instruction. All of these developmental courses operated at a deficit; that is, their costs were greater than the funds received via state funding and student tuition. The high cost of these courses emphasizes the need for additional funding if the Florida community colleges are to meet the needs of the significant number of students having remedial deficiencies. Appended is a brief description of the program. (Author/MJK)

REMEDIAL EDUCATION--IS IT WORTH IT?

by

Jon P. Cosby

Florida Junior College at Jacksonville
North Campus

A PRACTICUM PROPOSAL PRESENTED TO NOVA UNIVERSITY
IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE
DEGREE OF DOCTOR OF EDUCATION

NOVA UNIVERSITY

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INTRODUCTION

The basic objective of this practicum is to conduct a cost analysis of the remedial education program on the North Campus of the Florida Junior College at Jacksonville for the 1972/73 academic year. This includes analyzing the cost per student credit hour (SCH) for each remedial course offered in the Developmental Education Program on the North Campus.

In determining the cost per SCH for each of these courses, the same format used by the community college of Florida in reporting their 1972/73 cost analysis to the State Department of Education, was followed. This format divides the total cost per SCH into four categories: direct cost, departmental indirect cost, college indirect cost, and cost for plant and grounds operations. The costs to be allocated to each of these categories were defined in A System for the Analysis of Operating Expenditures of Florida Community Junior Colleges, which was prepared for Floyd T. Christian, Commissioner of Education, State of Florida, in February 1971, by the Associated Consultants in Education, Inc. These procedural definitions were followed in the 1972/73 cost analysis prepared by the community colleges in Florida and, accordingly, are adhered to in this analysis.

In addition, the categorical cost data determined in this analysis is compared to similar data reported by Florida Junior College's 1972/73 cost analysis report to the state. Further, these costs are combined

to determine the total cost of each course in the developmental program, as well as the cost of the total program. This total cost is, in turn, contrasted with the total funds generated via these developmental courses, to discern the level of deficit funding.

BACKGROUND AND SIGNIFICANCE

Justification of this practicum necessitates presenting rationale which, first, support performing a cost analysis of any educational program, and second, establish a need for analyzing the cost of the developmental education program of the North Campus.

Although cost analyses are, and have been for a long time, a common managerial tool in the private cooperative sector, the procedure was not utilized by the higher education system in Florida until 1971. The basis for the adoption of this system can be traced to the passage of the State of Florida Reorganization Act in 1968 by the Florida Legislature. This Act established within the Department of Administration a planning division to develop and coordinate the activities involved in educational planning and budgeting on a statewide basis. "Florida Statutes 229.531 also provide that the Commissioner of Education prepare a plan for effecting constructive educational changes and that planning capability of the Department of Education be expanded."[1] Furthermore, the statute mandated the establishment of a management information system and directed the Department of Education to use all appropriate modern management tools for planning.[2]

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[1]Division of Community Colleges, PPBS Project, Planning, Programming, and Budgeting System Procedures Manual (Tallahassee, Fla.: Department of Education, May 1973), p. 1.1.01.

[2]Ibid.

As a result of this legislation, the Commissioner of Education, Floyd T. Christian, contracted The Associated Consultants in Education, Inc., (ACE), of Tallahassee, Florida, to develop A System for the Analysis of Operating Expenditures of Florida Community Junior Colleges. In turn, ACE, working with a sub-committee on cost analysis established by the Junior College Council for Business Affairs,[1] developed a system for determining the operating cost of Florida Community Colleges. After field-testing the process at Daytona Beach Junior College, ACE submitted to the Commissioner on February 15, 1971, a manual depicting their cost analysis system.

The objectives of the system were as follows:

> This system for the analysis of the operating expenditures of the Florida Community Colleges is designed to show the cost of providing instruction by individual courses and by cluster of courses.
>
> The information developed by the system will facilitate the management decision-making process at the colleges as well as obtain valid cost data for the support of requests to the State Legislature..... Looking to future uses of the cost analysis system, care has been taken in the design of the system so that the data obtained from its use will be adaptable to the requirements of the Programming Planning Budgeting System for Florida Community Colleges that is currently under development.[2]

Some minor adjustments were made to the ACE's system,[3] and the modified procedure was followed by community colleges in preparing cost analyses reports for the 1970/71, 1971/72, and 1972/73 fiscal years;

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[1]The Associated Consultants in Education, Inc., prepared for the Commissioner of Education, cover letter in A System for the Analysis of Operating Expenditures of Florida Community Junior Colleges (Tallahassee, Fla.: ACE, 1971).

[2]Associated Consultants, p.1.

[3]The modifications and supplementations to the system were codified in Supplement Number One to A System for the Analysis of Operating Expenditures of Florida Community Colleges from the office of the Commissioner of Education.

and the first of these objectives was realized when, based upon these reports, a differentiated funding formula was utilized in preparing the 1973/74 and 1974/75 community college budgetary request from the State Legislature. The formula was also used in distributing funds to each of the twenty-eight community colleges[1] for the 1973/74 fiscal year, and most certainly will be used for the 1974/75 fiscal year.

The future integration of this cost analysis system into a complete program-planning-budgeting system (PPBS) had been implied in a June 16, 1970, memorandum from Dr. Lee G. Henderson, Director of the Division of Community Colleges of the Department of Education, to the Junior College Presidents' Council. In this memo Dr. Henderson stated:

> So that there is no question that we will be legally bound to move toward a program-planning-budgeting system, the following references and interpretations are provided for your information.
>
> Chapter 20.05(2), Florida Statutes, 1969 (Governmental Reorganization Act) requires that heads of departments "compile annually a comprehensive program budget covering such period as may be required reflecting all programs and fiscal matters related to the operation of his department and each program, sub-program and activity therein and such other matters as may be required by law."
>
> Chapter 23.011-23.018, describes the procedures for State Planning and Programming which define a PPBS approach including the minimum requirement of six year projections. Chapter 23 014 (2) states that "....each state agency shall annually file with the department its plan for each program under its jurisdiction to be undertaken or executed for the next six years. The plan shall include a full explanation of the need and justification for each program, its relationship to other similar programs begin carried out by state, local, federal or private agencies, the annual anticipated accomplishments of each program over the prior six years as is feasible."

Dr. Henderson concluded the memo by stating that "These Statutes indicate the eventual necessity of all junior colleges to go on a

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[1]There are actually two formulas: one for the seven small schools whose enrollment is less than 1300 F.T.E. and one for the other twenty-one with enrollment greater than 1300 F.T.E.

program-planning-budgeting system." He also said that a deadline had been set for the 1971/72 fiscal year to develop a PPBS approach by the Division and, accordingly, each college should develop a PPBS System which serves their own management and planning needs while conforming to the general specifications established by the Division.

Subsequently, in May 1973, the Division of Community Colleges distributed to the junior colleges in Florida a Planning, Programming, and Budgeting Systems Procedure Manual which was an outgrowth of an earlier field review edition.[1] This manual was intended to provide the guidelines for colleges in developing their 1975/76 fiscal year program plan and budget. Section six of this manual, A System for Analysis of Operating Expenditures of Florida Community Colleges, delineates the procedures to be followed in conducting the cost analysis and, in essence, contains the same basic principles and procedures of the original system developed in 1971 by ACE.

This manual was replaced as of May 1974, by a revised edition, which is intended to provide the guidelines for developing the 1976/77 fiscal year programs, plans, and budgets, which are due in the Division of Community Colleges by August 1, 1975.

Section Two of this manual deals with the cost analysis phase of the PPBS; however, there is little difference in this section and its predecessor. The point to be made here is that the cost analysis data will be very comparable for the 1970/71, 1971/72, 1972/73, and 1973/74 fiscal years. Also, the following objectives of the cost analysis, as

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[1]The title of the earlier edition was Design Criteria for a Planning, Programming, and Budgeting System for Florida Public Community Colleges.

stated in both the 1973 and 1974 editions of the PPBS Manual, are germane to the cost analysis of any educational program, including the developmental program which is the subject of this study:

> The system for analysis of the operating expenditures of Florida community colleges is designed to show the cost of providing instruction for each individual course and for various levels of course aggregations....
>
> The information developed by this system can be used for the following purposes:
>
> A. To aid college administrators in making resource allocations and programming decisions,
> B. To conduct comparative cost studies,
> C. To develop fiscal support requests for funds from the State Legislature, [or from district administrations at multi-campus institutions],
> D. To allocate funds to individual colleges, [or departments],
> E. To make long-range cost projections.[1]

As a number of other uses could be added to this list, it seems evident that a "cost analysis is of great importance to any management consideration"[2] and certainly something which is and will be an integral part of educational management systems in the state of Florida for some time to come.

A case for conducting a cost analysis having been presented, the second task is to justify the need to conduct a cost analysis of the Developmental Education Program on the North Campus.

First of all, the syllogism that a cost analysis is a cost analysis is a cost analysis, seems most appropriate. That is, any rational argument, including those previously presented, which is used to justify a

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[1]P. 6.201 in the 1973 edition; p. 2.01 in the 1974 edition.

[2]Richard A. Dempsey and Rodney P. Smith, Jr., Differentiated Staffing (Englewood Cliffs, New Jersey: Prentice-Hall, Inc., 1972), p. 34.

cost analysis in general would, in effect, justify a specific cost analysis. Thus, the objectives or purposes of a general system (like the one for the system of Florida) can be modified and utilized for a specific system--say, the Developmental Education Program.

The primary reason for undertaking this practicum, however, was not due to the positive attributes of a cost analysis system, but rather in apprehension of the negative impact that could be realized by the North Campus' Developmental Education Program from the implementation of the differentiated funding formula based on a cost analysis system. Basically, what is happening is that the high cost credit courses being taught for remedial and/or disadvantaged students under the auspices of the developmental program are being aggregated with regular college courses in the College's cost analysis reports and funding documents. Accordingly, these high cost courses are funded by the Division at the same rate as the less expensive regular credit courses.

Although the average cost of each course is reported to the Division by the colleges, they are aggregated by the Division into program structure categories, such as Letters, Biological Studies, Mathematics, and Compensatory, for funding purposes. For example, the individual cost of all the different courses in the Letters category--English, literature, reading, speech, etc. are averaged, and this average becomes the rate by which each course in that category is funded via the differentiated funding formula. Unfortunately, the developmental courses also get reported in these categories since they are credit courses; although their cost is much higher than the other courses in the category, they do not significantly raise the average cost nor the subsequent funding[1].

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[1]The funding is based upon the average cost of the courses from all of the community colleges.

The net result is that the regular courses in these categories are slightly overfunded, while the developmental courses are critically underfunded. This phenomenon is somewhat paradoxical in view of the fact that one of the purported advantages of differentiated funding is to encourage the community colleges in Florida to further develop some of the high cost programs which they had been reluctant to develop under the old Minimum Foundation Program.

Obviously, a college with a large proportion of its students enrolled in developmental credit courses will be severely underfunded. However, the developmental program of any college could be in jeopardy if the college's proration of their department budgets is based on the differentiated funding formula.[1] Regardless of the budgetary process employed at an institution, administrators are certainly going to be contrasting the cost of each program with the corresponding monies it generates via the differentiated funding formula.

A prima facie case could certainly be established exemplifying the exorbitant cost of the North Campus' developmental program with respect to its funding capabilities.

The precarious condition of the developmental program was realized when Florida Junior College, a multi-campus institution with four campuses, utilized the differentiated funding formula in allocating funds to each of its campuses for the 1973/74 fiscal year. Specifically, each campus, based upon the funds they would probably generate, was given a block of money, which they in turn could use autonomously to develop

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[1]This type of budgetary process seems logical, since funds are based on cost. It is one rational means of budgeting which is especially appropriate to large colleges or multi-campus institutions.

their operational budgets. The next step (which was considered on the North Campus) could have been to further distribute these monies to the departments by the same procedure. If this had occurred on the North Campus, the developmental program would have been seriously underfunded! Even though this did not occur and the program was adequately funded,[1] the total monies allocated to the North Campus should have been greater since a much larger proportion of its students are enrolled in developmental courses than are the students on the other campuses.[2] Consequently, the other campuses received the same monies to conduct regular classes as the North Campus did to conduct developmental classes. Hopefully, future North Campus budgetary requests, supported by the cost data gathered in this practicum, will be more equitable.

One other possible utilization of this study could result in the college realizing several thousands of dollars annually. Among the current funding categories is one called Compensatory Education, which is funded at a higher rate than any of the categories in which the developmental courses are being funded.[3] The criteria of the courses to be reported in the compensatory category is as follows: "Instructional activities designed to meet the academic and personal needs of educationally disadvantaged students. These activities are intended to bridge the gap between secondary school and college for students with

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[1]The academic dean made the funding of this program his number one priority, and it was the only priority item from his original budget request which was not cut.

[2]Neither of the other campuses offerred any remedial courses at that time.

[3]All of the developmental courses are currently being funded from the categories under the Advanced and Professional Programs: Letters, Mathematics, Social Science, etc.

specifically identified deficiencies."[1]

The remedial classes reported and funded under compensatory are generally non-credit or below "college level." However, the remedial courses (or developmental courses) at Florida Junior College are credit courses and they have not been reported or funded in the compensatory category because there has been some question as to whether the same course could be reported in two different categories. For example, can College Mathematics (MAT 101) taught in the developmental program be reported in the compensatory category, if the same course taught in regular classes is reported in the Mathematics category? One can see the apparent dilemma this could present to state auditors and other individuals not familiar with the situation. Nevertheless, these high cost developmental courses[2] do meet the definition of compensatory courses and should be funded accordingly. Thus, the college is pursuing this possibility with the Division[3] and will use the results of this practicum to support their efforts, if necessary.

In summary then, a cost analysis of the North Campus' developmental program is feasible for at least three specific reasons:

1. To make rational management decisions concerning the program[4]
2. To support future North Campus budgetary requests, and
3. To provide rationale for reporting these courses in the compensatory category for funding purposes.

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[1]PPBS Procedures Manual, 1974 edition, p. 2.13.

[2]A brief description of the developmental program can be found in the appendix.

[3]This action was initialed by this writer via the Vice President of Campus Operations after becoming involved in this study.

[4]This is the terminal goal for performing a cost analysis on any program.

PROCEDURE

The 1972/73 cost analysis of the Developmental Education Program on the North Campus was conducted in accordance with the procedures as delineated by A System for the Analysis of Operating Expenditures of Florida Community Junior Colleges as modified by Supplement Number One.

This system was chosen because it had been the one utilized by Florida's community colleges in conducting their cost analyses for the 1970/71, 1971/72, and 1972/73 fiscal years. The system, designed for community college programs, apparently is reliable since it has been continually used for the last three years. Furthermore, its objectives are germane to this study;[1] and the categorical data collected can easily be compared with similar data at the North Campus, Florida Junior College, or any other community college in Florida. In addition, Florida Junior College has adjusted some of its accounting and budgeting procedures to facilitate just such an analysis.

In this system, "....the analysis of operating expenditures is based on the contention that instruction is the productive function of the Florida Community Colleges; and all operating expenditures are assigned and/or distributed to that function."[2] The functional unit of measurement is the student semester hour of credit (SCH), but costs are

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[1]The objectives of the system are listed on page 7 of this report.

[2]ACE, p. 3.

also computed for each full-time equivalent student (FTE).[1] To facilitate the analysis, the total cost per SCH is subdivided into four categories: direct cost, indirect departmental cost, indirect general college cost, and cost of plant and grounds operations; and each of these is explicitly defined.

The direct cost of a course is the same proportion of the teacher's salary and fringe benefits[2] as the course is of the teacher's total job. To discern the direct cost of the developmental courses,[3] first the instructors annual salaries (which were taken from the monthly budgetary printouts) were increased by 13% to allow for fringe benefits;[4] then the 1972/73 course printouts were examined to determine the portion of the instructors job and total salary[5] that would be assigned to each of the developmental classes he or she taught.

All the cost directly attributable to a course other than the direct cost for teachers' salaries fall into the indirect departmental cost category. This includes "current expense" and "capital outlay" expenditures plus the salaries of individuals whose non-instructional services are directly supportive of the specific courses in question.[6]

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[1]An FTE is equivalent to thirty SCH's.

[2]Fringe benefits include the College's contributions: for insurance, social security, and retirement.

[3]The costs were determined for English Composition, Developmental Reading, College Mathematics, Elementary Algebra, and Origins of American Society.

[4]This percentage was used on the advice of the College's comptroller.

[5]Total salary means salary plus benefits.

[6]This includes salaries for clerks, counselors, division chairmen, etc. who work directly with these courses.

Furthermore, the current expense monies are prorated to each course within a department on the basis of SCH's generated by the course. Thus, the total current expense of the developmental program[1] was divided by the total number of SCH's generated by all of the developmental courses, to obtain the average current expense cost per SCH for each developmental course.

Capital outlay expenditures consist of the monies spent during the fiscal year on equipment plus an annual depreciation equal to 10% of the total value of all moveable equipment acquired in the last ten years.[2] Although this money is also allocated to departments in most schools, it is to be distributed to the courses within the departments on a best estimate of use method. That is, it is left up to the colleges to decide what percentages of the total cost should be assigned to each course.

For the developmental courses, this estimate was made by the division chairman responsible for the developmental program. He also estimated the value of the moveable equipment used in figuring the 10% cost for depreciation. The total capital expense of the developmental program was obtained by adding the depreciation cost to the 1972/73 fiscal year expenditures for capital outlay. In turn, this total was distributed to each of the developmental courses in accordance with the best estimate method.

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[1]The total current expense of the developmental program was extracted from the different budgets to which the instructors were assigned, as all were not assigned to the developmental budget.

[2]This was the method used to figure depreciation cost in 1972/73, but it has been changed and the new procedure can be found on p. 2.32 in the 1974 PPBS Manual.

The only indirect departmental cost of the developmental courses for salaries were from the division chairman, his secretary, and a part-time counselor, who worked exclusively with the developmental students during orientation. The counselor's salary was distributed directly to each developmental course on the basis of the SCH's since his work was equally distributed among the students in the program. The salaries for the division chairman and his secretary, however, were distributed on the basis of the number of full-time instructors in his division. Thus, the same proportionate cost of these salaries was assigned to the developmental courses as the number of instructors for each course is to the total instructors in the division. This type of proration was used since the jobs of the division chairman and his secretary are equally divided among instructors rather than students.

In the remaining two categories, the indirect general cost and the cost for plants and grounds operation, the costs had been both computated on a college-wide basis in the College's 1972/73 cost analysis report and distributed equally to all courses at the College per SCH. Since these categorical costs are probably the best estimate available, they were also used as the average cost for the developmental courses.[1]

Having determined each of the four categorical costs per SCH for each developmental course (direct, indirect departmental, indirect college, and plant and ground operation), they were combined to produce the total cost per student semester hour of credit for each of the developmental courses taught on the North Campus, thus achieving the primary objective of this practicum.

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[1]This was mandatory to preserve the comparability of this analysis.

This data was then used to calculate the total cost of the North Campus' developmental program. Specifically, the average course costs per SCH were multiplied by the respective number of SCH's each had generated to produce the total cost for each course. These, in turn, were combined to get the total cost of the North Campus developmental program for the 1972/73 fiscal year.

The final task to be accomplished was to contrast the cost of the developmental program with its level of funding via differentiated funding.[1] The Division, however, had not adopted a formula in 1972/73, so it was necessary to modify the Division's 1973/74 formula by reducing the funding rates by 5%.[2] This quasi-formula then, was used to generate the funds which, in turn, were contrasted with the costs of the North Campus' Developmental Education Program.

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[1]There is little to gain in contrasting this cost with the funds generated under the Minimum Foundation Program, since the MFP did not relate cost solely to instruction nor was it predicated on a cost analysis system.

[2]Five percent was used because it was the rate the Division increased the 1972/73 course cost to determine the funding rates for their 1973/74 differentiated formula.

RESULTS

Of the four categorical costs making up the total cost of the North Campus' Developmental Program for the 1972/73 fiscal year, only the direct instructional and the indirect departmental costs are calculated in this practicum. The indirect college cost and the cost of plants and grounds operations are taken from the College's 1972/73 cost analysis report and, along with the two costs determined here, are used to ascertain the total cost of the program. In turn, the program cost is contrasted with its corresponding funding via differentiated funding and student tuition.

Direct Cost

The average direct cost per SCH for each of the developmental courses is given in Table III, while the cost data used in calculating these averages appear in Tables I and II.

Table I contains the annual salary for each developmental instructor along with the "total salary" which includes the fringe benefits. These "total salaries" are distributed to the courses taught by the instructors in Table II in accordance to the percentage of his total job required in teaching the respective courses.

In Table III, these prorated instructional course costs (column d) are divided by the total student semester hours[1] (column c) to obtain

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[1]The student semester hours are the number of students (column b) times the number of credits awarded in the course. All of the developmental courses have three credits.

the average direct cost per SCH for each developmental course (column e). This average is also computed for each funding category--Mathematics, Letters, Social Science--and for the developmental program.

Reading has the highest instructional cost and, as would be expected, social science, the lowest. In comparison, however, with the corresponding averages for the regular classes, developmental English and math are about three times as great, while reading and social science courses are only twice as great.[1]

In addition, the average direct cost of a developmental course per SCH is $33.75 (which means it takes roughly $100 in salaries alone for each student enrolled in a three-credit-hour developmental class) as compared to the $13.10 average for all the courses in the Advanced and Professional Program.[2]

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[1]These comparisons are given in Table A in the appendix.

[2]Ibid.

TABLE 1

Faculty Salaries and Fringe Benefits

Instructor	Annual Salary	Total Salary (Annual salary plus 13% for fringe benefits)
Bain	$ 10,399.92	$ 11,751.91
Hall	12,060.72	13,628.61
Hutchings	9,898.80	11,185.64
Fritts	12,671.28	14,318.55
Grant	12,060.72	13,628.61
Heath	12,988.08	14,676.53
Weaver	11,479.56	12,971.90

TABLE II

Distribution of Faculty Salary

Instructor	Courses	Contact Hours	FTE* (Instruction)	Allocation of Salary
Bain	MAT-101	15	0.41	$ 4,818.28
	MAT-119	10	0.27	3,173.02
	Other	12	0.32	3,760.61
Hall	MAT-101	5	0.14	1,908.01
	Other	30	0.86	11,720.60
Hutchings	ENG-101 and 102	28	0.70	7,829.95
	Other	12	0.30	3,355.69
Fritts	ENG-101 and 102	20	0.53	7,588.83
	Other	18	0.47	6,729.72
Grant	ENG-101 and 102	35	0.85	11,584.32
	Other	6	0.15	2,044.29
Heath	ENG-161	41	0.87	12,768.58
	Other	6	0.13	1,907.95
Weaver	SSS-101 and 102	30	0.83	10,766.68
	Other	6	0.17	2,205.22

*FTE: This is a full-time equivalent instructor as opposed to a full-time equivalent student.

TABLE III

Direct Instructional Cost
By Course--By Discipline--By Program

Course/Cluster Name	Number	Instructor [a]	No. of Students [b]	Stud. Sem. Hrs. of Credit [c]	Teaching Salary Cost [d]	Teaching Sal. Cost/Stu.Sem.Hr. [e]
Mathematics						
College Math	MAT 101	Bain	50	150	$ 4,818.28	
College Math	MAT 101	Hall	20	60	1,908.01	
	sub-total		70	210	6,726.29	$ 32.03
Elem. Algebra	MAT 119	Bain	30	90	3,173.02	35.26
Total Mathematics			100	300	9,899.31	33.00
Letters						
Eng. Composition	ENG 101&102	Fritts	65	195	7,588.83	
Eng. Composition	ENG 101&102	Grant	122	366	11,584.32	
Eng. Composition	ENG 101&102	Hutchings	87	261	7,829.95	
	sub-total		274	822	27,003.10	32.85
Devel. Reading	ENG 161	Heath	96	288	12,768.58	44.34
Total Letters			370	1110	39,771.68	35.83
Social Science						
Origins of Am. Soc.	SSS 101&102	Weaver	127	381	10,766.68	28.26
Total Social Science			127	381	10,766.68	28.26
TOTAL DEVELOPMENTAL PROGRAM			597	1791	60,437.67	33.75

Indirect Departmental Cost

Indirect departmental cost is made up of non-instructional salaries, current expenses, and capital outlay expenditures. For these three expenditures, the costs of the developmental courses are given in Tables IV, V, and VI. They are aggregated in Table VII, and these aggregates are divided by the SCH generated by the courses to obtain the indirect departmental cost per SCH for the developmental courses. These tables, however, are somewhat misleading since the total cost is being prorated to the different developmental courses; thus, in the cost columns, the total cost is actually used to produce the addends, instead of vice versa.

The non-instructional salaries in Table IV are distributed by two different means: The administrative and clerical on an instructional basis and the counselor on the SCH basis.[1] The course costs are obtained by multiplying the total cost for salaries by either the percentage of total FTE or SCH relative to each course. For example, the administrative and clerical cost for reading is 3.1% of $24,971.20. Both of these non-instructional course costs are also listed in Table VII (column a).

In Table V, the current expenses are also distributed to the developmental courses according to the number of SCH's generated. The total cost being distributed, $2,988.76, is the actual expenditures incurred in the developmental education program's budget. The distributed current expense course costs in this table are also listed in Table VII (column b).

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[1]The rationale for this is given on page 15 of this report.

Depreciation and current year expenditures for equipment make up the capital outlay expenses which are distributed in accordance to the best estimate of their utilization. The estimates used in prorating the capital outlay expenses to the developmental courses are given in Table VI, along with the prorated course costs for both depreciation and current year expenditures for equipment.[1] These costs are also listed in Table VII (columns c and d).

The course costs for salaries, current expense, depreciation, and equipment are combined to get the total indirect departmental course cost listed in Table VII (column e). In turn, these totals are divided by the number of SCH generated by the courses (column f) to obtain the average indirect departmental cost per SCH (column g) for each of the developmental courses, as well as for the different funding categories.

Again, reading is the most expensive course and social science the least, and the indirect departmental cost for each developmental course is much higher than the corresponding cost of the regular courses.[2] Unfortunately there is very little difference in the indirect departmental cost of any of the regular courses (which leads one to question the validity of this data) and therefore, little is gained in contrasting these course costs with developmental course costs. Nevertheless, with the exception of reading, the indirect departmental costs per SCH of the developmental courses are about four times as great as that of the regular courses.[3]

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[1]These costs will change drastically for 1973/74 as $20,000 was spent on equipment to be used in the English courses.

[2]See Table A in the appendix.

[3]Ibid.

TABLE IV

Non-Instructional Salary Distribution

	For Administrative & Clerical			For Counseling		
Courses	Instructional FTE	% of Total Inst. FTE	Salary Distribution	Student Sem. Hrs.	% of Total SCH	Salary Distribution
MAT 101	0.55	2.0	$ 499.42	210	11.7	$ 137.05
MAT 119	0.27	1.0	249.71	90	5.0	58.57
ENG 101&102	2.08	7.7	1,922.78	822	45.9	537.66
ENG 161	0.85	3.1	799.08	288	16.1	188.59
SSS 101&102	0.83	3.1	774.11	381	21.3	249.50
Other	22.42	83.0	20,726.10	---	----	------
TOTAL	27.0	99.9	24,971.20*	1791	100.0	1171.38*

*These salaries do include fringe benefits.

TABLE V

Current Expense Distribution

Courses	Student Credit Hours	% of Total SCH	Cost Distribution
MAT 101	210	11.7	$ 349.68
MAT 119	90	5.0	149.44
ENG 101&102	822	45.9	1,371.84
ENG 161	288	16.1	481.19
SSS 101&102	381	21.3	636.61
TOTAL	1791	100.0	2,988.76

TABLE VI

Capital Outlay Distribution

Courses	% of Equipment Utilization	Depreciation	Current Year Expenditure
MAT 101	3	$ 60.00	$ 30.15
MAT 119	2	40.00	20.10
ENG 101&102	25	500.00	251.23
ENG 161	70	1,400.00	703.44
SSS 101&102	0	0	0
TOTAL	100	2,000.00	1004.92

TABLE VII

Indirect Departmental Costs

Developmental Education	Salaries Excluding Direct Teachers [a]		Current Expenses [b]	Depreciation Charges 10%/Gross Value [c]	Equipment Costs Cur. Year [d]	Total Indirect Depart. Costs [e]	Total SCH [f]	Cost Per SCH [g]
	Admin. & Clerical	Counseling						
Letters								
ENG 101&102	$1,922.78	$ 537.66	$1,371.84	$ 500.00	$ 251.23	$ 4,583.51	822	$ 5.58
ENG 161	799.08	188.59	481.19	1,400.00	703.44	3,572.30	288	12.40
Total Letters						8,155.81	1110	7.35
Mathematics								
MAT 101	499.42	137.05	349.68	60.00	30.15	1,076.30	210	5.13
MAT 119	249.71	58.57	149.44	40.00	20.10	517.82	90	5.75
Total Math						1,594.12	300	5.31
Soc. Science								
SSS 101&102	774.11	249.50	636.61	0.00	0.00	1,660.22	381	4.36
TOTAL	4,245.10	1,171.37	2,988.76	2,000.00	1,004.92	11,410.15	1791	6.37

Total Cost Per Student Semester Hour

In Table VIII, the direct cost (from Table III) and the indirect departmental cost (from Table VII) are combined with the indirect college cost and the cost of the plant and ground operation (taken from the College's cost analysis report) to obtain the total cost per student semester hour by course, by funding category, and by program (column f). The course costs are also given for each FTE student (column g) and, since an FTE is equivalent to 30 SCH, this cost is thirty times the cost per SCH.

Each of the developmental courses' cost per SCH is much greater than the corresponding cost of the same courses offered at the College in 1972/73, and, on the average, the developmental courses cost 80% more than the courses offered in the Advanced and Professional Program.[1] However, the differences between the cost of developmental courses and regular courses is greater than 80% because the cost of the developmental courses were also included in the advanced and professional program categories by the College in the 1972/73 cost analysis report. There is also a major difference in the relationship of their categorical costs to their total cost, in that the direct cost and individual departmental cost of the developmental courses make up 70% of their total cost, while they compromise only 46% of the total cost of the advanced and professional courses.[2] This discrepancy is indicative of the nature

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[1]See Table A in the appendix.

[2]These percentages were computed from the data in Table A in the appendix.

of the developmental program, which fosters small classes and utilizes many of the expensive teaching-related technologies.

Without question, the costs data in Table VIII supports the proposition that developmental courses should not be funded in the same discipline categories as the regular academic and professional courses. Accordingly, these courses should be reported in a separate funding category, either as compensatory or, better yet, a unique category specifically established for just such courses or programs.

If this is not done, it is conceivable that an austere budget appropriation would force the North Campus to curtail its developmental education program, and this would be unfortunate since there is evidence[1] that remedial students are doing significantly better in this program than they are in regular classes.

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[1]See the abstract in the appendix.

TABLE VIII

Total Cost Per Student Semester Hour of Credit
By Course--By Discipline--By Program
1972/73 Fiscal Year

Course/Cluster Name	Number	[a] Total SCH	[b] Direct Cost Per SCH	Indirect Cost Per SCH: [c] Dept.	[d] College	[e] Cost/SCH for Plant & Grounds Operation	Total Operational Cost: [f] Per SCH	[g] Per FTE
Letters								
Eng. Composition	ENG 101&102	822	$32.85	$5.58	$14.05	$3.40	$55.88	$1,674.00
Dev. Reading	ENG 161	288	44.34	12.40	14.05	3.40	74.19	2,225.70
Total Letters		1110	35.83	7.35	14.05	3.40	60.62	1,818.60
Mathematics								
College Math	MAT 101	210	32.03	5.13	14.05	3.40	54.61	1,638.30
Elem. Algebra	MAT 119	90	35.26	5.75	14.05	3.40	58.46	1,753.80
Total Mathematics		300	33.00	5.31	14.05	3.40	55.76	1,672.80
Social Science								
Origins of Am. Soc.	SSS101&102	381	28.26	4.36	14.05	3.40	50.07	1,502.10
Total Social Science		381	28.26	4.36	14.05	3.40	50.07	1,502.10
TOTAL DEVELOPMENTAL PROGRAM		1791	33.75	6.37	14.05	3.40	57.57	1,727.10

Deficit Funding

The final task is to discern the amount the developmental program is underfunded.

To accomplish this, first in Table IX the cost data from Table VIII is used to calculate the categorical costs, whose combination gives the total cost of the North Campus Developmental Education Program for the 1972/73 fiscal year. Next, in Table X the 1973/74 differentiated funding formula rates, reduced by 5%,[1] are combined with the students' tuition to produce the total funding per FTE for each developmental course, which, in turn, is multiplied by the number of FTE generated by each developmental course to obtain the total funds derived via the courses and the program.

Also appearing in Table X is the funding that would have been realized if all the developmental courses were funded as compensatory courses vis-a-vis the academic disciplines. Finally, the cost data in Table IX and the funding data in Table X are contrasted in Table XI to discern the level of deficit funding for each course as well as that of the total developmental program.

To say the least, the data in Table XI clearly indicates the vulnerability of the developmental program. The program costs nearly $36,000 more than it generated via differentiated funding and student tuition; however, this would have been nearly $9,000 less if the developmental courses had been funded in the compensatory category. As would be expected, reading has the greatest deficit per SCH, but surprisingly,

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[1]The rationale for this is given on page 16 of this report.

English has the smallest. The average deficit per SCH for all of the developmental courses is $20.04, which means that about $60 must be siphoned off from some other source to cover the cost of each student enrolled in each developmental class.

Unfortunately, most of this $60 must be absorbed by other North Campus programs rather than the College as a whole, since nearly 70% of the cost of the developmental courses are attributable to instructors' salaries and other departmental expenses. Clearly, then, one can see the precarious circumstance the North Campus' Developmental Program encounters if budgets are allocated solely on the basis of the differentiated funding formula.

TABLE IX

Total Cost of Developmental Program

Course	Direct Cost	Indirect Dept.	Indirect College	Plants & Grounds	Total Cost
ENG 101&102	$27,002.70	$4,586.76	$11,549.10	$2,794.80	$45,933.36
ENG 161	12,769.92	3,571.20	4,046.40	979.20	21,366.72
MAT 101	6,894.30	1,077.30	2,950.50	714.00	11,636.10
MAT 119	3,173.40	517.50	1,264.50	306.00	5,261.40
SSS 101&102	10,767.06	1,661.16	5,353.05	1,295.40	19,076.67
DEVELOPMENTAL PROGRAM	60,607.38	11,413.92	25,163.55	6,089.40	103,274.25

TABLE X

Total Funding of Developmental Program

Courses	No. of FTE	Funds per FTE	Funds per FTE Less 5%	Tuition	Total fund per FTE	Total Funds
ENG 101&102	27.4	$ 977.67	$ 928.79	$255.00	$1,183.79	$ 32,435.85
ENG 161	9.6	977.67	928.79	255.00	1,183.79	11,364.38
MAT 101	7.0	879.90	835.91	255.00	1,090.91	7,636.37
MAT 119	3.0	879.90	835.91	255.00	1,090.91	3,272.73
SSS 101&102	12.7	782.14	743.03	255.00	998 03	12,674.98
Developmental Program	59.7					67,384.31
COMPENSATORY	59.7	1,075.44	1,021.67	255.00	1,276.67	76,217.20

TABLE XI

Level of Deficit Funding of the Developmental Program

Courses	No. SCH	No. FTE	Total Cost	Total Funding	Deficit Funding	Deficit per SCH	Deficit per FTE
ENG 101&102	822	27.4	$45,933.36	$32,435.85	$13,497.51	$16.42	$492.61
ENG 161	288	9.6	21,366.72	11,364.38	10,002.34	34.73	1,041.91
MAT 101	210	7.0	11,636.10	7,636.37	3,999.73	19.05	571.39
MAT 119	90	3.0	5,261.40	3,272.73	1,988.67	22.10	662.89
SSS 101&102	381	12.7	19,076.67	12,674.98	6,401.69	16.80	504.07
Developmental Program	1791	59.7	103,274.25	67,384.31	35,889.94	20.04	601.17
Compensatory Program	1791	59.7	103,274.25	76,217.20	27,057.05	15.10	453.22

RECOMMENDATIONS

The costs data collected in this practicum will certainly be influential in all future managerial decisions involving the North Campus' Developmental Education Program, and eventually the question "Remedial Education--Is it worth it?" will have to be resolved. This decision however, should not be made until the program's educational credibility has been discerned.[1] Accordingly, the following recommendations seem in order:

1. The current operational level of the developmental program be maintained for the 1974/75 academic year. [As this writer has that authority, this recommendation will be adhered to.]
2. Florida Junior College request that the Division of Community Colleges allow the College to report developmental courses in the compensatory category for funding purposes. [This request has already been made, but no official reply has been received as of this data.]
3. Florida Junior College request that the Division of Community Colleges establish a special funding category for credit courses designed specifically for remedial students. [An informal inquiry will be made with the Divisional Staff and if their response is promising, this writer will implement a formal request via the Vice President of Campus Operations

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[1]The abstract in the appendix summarizes the results of the first two semesters of a study toward this end.

of Florida Junior College.]

4. Since the developmental program is a high cost innovation program designed to serve disadvantaged students, external financial support be solicited from among the various private, state, or federal agencies. [This writer has already contacted the Director of Resource Development at the College to assist in identifying the proper sources and subsequent preparation of the proposals.]
5. The cost data collected in this practicum be used as rationale in support of future budgetary requests for the developmental program. [This is within the responsibility of this writer.]
6. The cost data in this practicum coupled with the findings from the two-year study of the developmental program[1] be used to answer the question, "Remedial Education--Is it worth it?" upon completion of the two-year study in August, 1975. [The resolution of this question will determine the future of the North Campus' Developmental Education Program.]

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[1]The abstract in the appendix summarizes the results of the first two semesters of a study toward this end.

BIBLIOGRAPHY

Associated Consultants in Education, Inc., prepared for the Commissioner of Education, A System for the Analysis of Operating Expenditures of Florida Community Junior Colleges. Tallahassee, Florida: ACE, 1971.

Cosby, Jon P. "The Developmental Program--Is It Working?" Unpublished practicum. Nova University, 1974.

Cost Analysis Report, Florida Junior College at Jacksonville 1972/73 report to the Division of Community Colleges, August, 1973.

Dempsey, Richard A. and Rodney P. Smith, Jr. Differentiated Staffing. Englewood Cliffs, New Jersey: Prentice-Hall, Inc., 1972.

Division of Community Colleges, PPBS Project, Planning, Programming and Budgeting System Procedures Manual. 1973 ed. Tallahassee, Florida: Department of Education, 1973.

Division of Community Colleges, PPBS Project, Planning, Programming and Budgeting System Procedures Manual. 1974 ed. Tallahassee, Florida: Department of Education, 1974.

Horngren, Charles T. Cost Accounting: A Managerial Emphasis. 3rd ed. Englewood Cliffs, New Jersey: Prentice-Hall, Inc., 1972.

Office of the Commissioner of Education, Supplement Number One to A System for the Analysis of Operating Expenditures of Florida Community Colleges. Tallahassee, Florida: Department of Education, 1971.

Touchton, Reginald "A Description of a Developmental Education Program." Unpublished practicum. Nova University, 1974.

APPENDIX

BRIEF DESCRIPTION OF THE DEVELOPMENTAL EDUCATION PROGRAM

I. PROGRAM

All courses are designed to offer college credit. A student who makes below the standards considered necessary for college work as indicated by prescribed testing devices is strongly encouraged to take the full program. If the student is deficient in only one area, then he may enroll for that one course only. The student begins at his level of proficiency and proceeds from there.

The full program consists of the following courses;

ENG 105 COMMUNICATIONS FOR TODAY'S WORLD

ENG 161 DEVELOPMENTAL READING

MAT 101 COLLEGE MATHEMATICS
or
MAT 119 BEGINNING ALGEBRA

SOCIAL SCIENCES

Additional courses are offered the second semester for students who wish to continue their education in the program.

II. LEARNING STRATEGIES

1. Classes five days a week (2/3 more classroom time at no additional cost).
2. Small classes for personal attention (Max. 20).
3. Assistance from student tutors as well as instructors.
4. Individualized instruction (Student begins at his level of proficiency and proceeds at his own learning rate).
5. Programmed Instruction
   a. Various published materials developed by the instructors
   b. Cassette and reel-to-reel tapes
   c. Video Cassette tapes
   d. Filmstrips
   e. Slides
   f. Motion picture films
6. A Communications Laboratory available to the student for additional help.

TABLE A

Comparison of Costs of Regular College and Developmental Courses

Course/Cluster		Direct Cost Per SCH	Indirect Cost Per SCH		Cost/SCH for Plant & Grounds Operation	Total Operational Cost	
Name	Number		Dept.	College		Per SCH	Per FTE
English	ENG 101&102	11.78	1.37	14.05	3.40	30.60	918.00
Dev. English	ENG 101&102	32.85	5.88	14.05	3.40	55.88	1,674.00
Reading	ENG 161	29.49	1.37	14.05	3.40	48.31	1,449.30
Dev. Reading	ENG 161	44.34	12.40	14.05	3.40	74.19	2,225.70
College Mathematics	MAT 101	11.35	1.37	14.05	3.40	30.17	905.10
Dev. College Math	MAT 101	32.03	5.13	14.05	3.40	54.61	1,638.30
Elementary Algebra	MAT 119	12.78	1.37	14.05	3.40	31.60	948.00
Dev. Elem. Algebra	MAT 119	35.26	5.75	14.05	3.40	58.46	1,753.80
Origins of Am. Society	SSS 101&102	10.31	1.34	14.05	3.40	29.10	873.00
Dev. Ori. of Am. Soc.	SSS 101&102	28.26	4.36	14.05	3.40	50.07	1,502.10
Total Adv. and Prof. Program		13.10	1.56	14.05	3.40	32.11	963.30
Average per Developmental Program		33.75	6.37	14.05	3.40	57.57	1,727.10

ABSTRACT: THE DEVELOPMENTAL PROGRAM--IS IT WORKING?

In this study on the North Campus of the Florida Junior College at Jacksonville, remedial students entering the Developmental Education Program in the fall term 1973/74 passed more courses and made better grades than comparable students who enrolled in regular classes, not only for the fall term but the subsequent term as well.

For the fall term, the developmental students averaged passing 7.9 hours while maintaining a 2.30 grade point average, which were both significantly higher than the regular students, who passed only 5.6 hours with a 1.20 GPA. In addition, nearly four times as many developmental students passed all of their courses as did regular students; concomitantly, the regular students withdrew from 25% of their classes during the term compared to only 4% of the developmental students.

The discrepancies between the students were not as great for the winter term. This was due, in part, however, to the higher attrition rate of the regular students, which was almost twice that of developmental students. Nevertheless, the winter term differences between the groups were still quite large: on the average, the developmental students earned a 2.20 GPA and passed 9 hours, while the regular students earned a 1.54 GPA and passed 6.9 hours. Again, a greater proportion of developmental students (39%) passed all their courses than regular students (27%); likewise, the regular students withdrawal rate was three times that of the developmental students.

Although the study is to continue for another year, these preliminary findings do indicate that remedial students can be much more successful by entering programs specifically designed to cope with their deficiencies.

LGW 9/9/74

Ralph D. Turlington
COMMISSIONER

STATE OF FLORIDA
DEPARTMENT OF EDUCATION
TALLAHASSEE 32304

LEE G. HENDERSON
DIRECTOR
DIVISION OF COMMUNITY COLLEGES

September 4, 1974

Dr. Benjamin R. Wygal, President
Florida Junior College at Jacksonville
1246 Cumberland Road
Jacksonville, Florida 32205

Dear Ben:

I am replying to your letter of August 21, concerning the classification of credit compensatory courses as a developmental program for reporting and funding.

This category of courses should be included in the 3000 category if, in fact, you have developed the program with the objective of meeting the needs of the educationally disadvantaged.

I presume from your explanation that the curriculum is designed to assist the student in bridging the gap from high school to college. Therefore, this letter serves as authorization for you to make changes as appropriate.

Sincerely,

Lee

Lee G. Henderson

LGH/mlb

FLORIDA JUNIOR COLLEGE AT JACKSONVILLE
DISTRICT OFFICES
JACKSONVILLE, FLORIDA 32205

OFFICE OF THE PRESIDENT

August 21, 1974

Dr. Lee Henderson, Director
Division of Community Colleges
Tallahassee, Florida 32304

Dear Lee:

In the fall term of 1971, Florida Junior College began to phase out the non-credit compensatory courses (GST's) in lieu of special credit compensatory courses. In these special credit courses, the student remedial deficiencies are corrected before proceeding to master the regular course objectives.

Several things have been done to enhance the students' chances of success in these courses. First, the contact hours have been increased from three hours per week, in the regular sections, to five hours per week in the compensatory sections; the class size is held to a maximum of 20; the classes are all openended; student tutors are used, and the latest teaching technologies in conjunction with master teachers are utilized to employ an individualized learning mode.

This program has proven to be very successful. A recent study has shown that remedial students entering this program are doing significantly better than remedial students entering regular college classes.

Although this is a proven and successful compensatory program, we are faced with a dilema in terms of the differential funding formula. Currently, we are reporting these special compensatory credit courses (ENG 105, ENG 102, MAT 101, MAT 119, SSS 101, SSS 102, and IDS 150) in their respective credit categories, but these courses are compensatory courses and their cost is much greater than the regular credit course. We have contacted Bill Odum and, in his opinion, these credit courses do meet the compensatory definition and should be funded accordingly. Therefore, we respectfully request that Florida Junior College at Jacksonville be authorized to report these special sections of the credit courses in the compensatory category for funding purposes.

We will be glad to supply additional information as needed.

Sincerely,

Benjamin R. Wygal
President

BRW/HJO/mps

cc: Dr. O. R. Finch
Dean Jon Cosby
Mr. R. L. Watson